

Amendments to the Claims

1. (Currently amended): A mine door leaf of generally laminar construction mounted for swinging between open and closed positions in a doorway in a mine passage, said mine door leaf comprising a central core of a solidified composition, outer panels on opposite faces of the core, the core having a force-transmitting relationship with the panels constituting the panels and core as an integral stress-resistant structure resistant to stresses to which the door leaf is subjected in a mine, including torsion-induced stresses, shear and bending stresses, and stresses induced by its own weight, and one or more hinge components on the leaf.

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2. (Currently amended): A The mine door leaf as set forth in claim 1 wherein the force-transmitting relationship is established by adhesion ~~and/or~~ and mechanical coupling of the core to the panels.

3. (Currently amended): A The mine door leaf as set forth in claim 2 wherein the core comprises a fire-resistant foam material.

4. (Currently amended): A The mine door leaf as set forth in claim 3 wherein the core comprises a fire-resistant polyurethane foam material adherent to the panels thereby establishing the force-transmitting relationship.

5. (Currently amended): A The mine door leaf as set forth in claim 1 comprising a frame having a top, bottom and sides, the panels being secured on the frame in opposing

spaced-apart relationship enclosing a space between the panels bounded by the top, bottom and sides of the frame, the core comprising a solidified filling in said space.

6. (Currently amended): A The mine door leaf as set forth in claim 5 wherein said door panels are secured to the top, bottom and sides of the frame on opposite faces of the frame.

7. (Currently amended): A The mine door leaf as set forth in claim 5 wherein the force-transmitting relationship is established by adhesion ~~and/or~~ and mechanical coupling of the filling to the door panels.

8. (Currently amended): A The mine door leaf as set forth in claim 7 wherein the filling is a fire-resistant foam material.

9. (Currently amended): A The mine door leaf as set forth in claim 8 wherein the frame has one or more filling openings through which said filling was introduced in a fluent state.

10-13. (Cancelled)

14. (Currently amended): A The mine door leaf as set forth in claim 5 wherein the filling is a fire-resistant material having strength in tension and compression, and wherein the frame or one or more of the door panels has one or

more filling openings through which said filling was introduced in a fluent state.

15-30. (Cancelled)

31. (New): The mine door leaf as set forth in claim 1 wherein said mine door leaf is mounted on a doorway frame in said mine passage, said doorway frame comprising a column yieldable to accommodate mine convergence without permanent deformation of the doorway frame.

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32. (New): The mine door leaf as set forth in claim 1 wherein the force-transmitting relationship is established by adhesion of the core to the panels.

33. (New): The mine door leaf as set forth in claim 1 wherein the force-transmitting relationship is established by mechanical coupling of the core to the panels.

34. (New): The mine door leaf as set forth in claim 33 further comprising a mechanical coupling device for mechanical coupling of the core to the panels, said mechanical coupling device comprising at least one of the following: wire screen; and rebar-type elements.

35. (New): The mine door leaf as set forth in claim 5 wherein the force-transmitting relationship is established by adhesion of the filling to the door panels.

36. (New): The mine door leaf as set forth in claim 5 wherein the force-transmitting relationship is established by mechanical coupling of the filling to the door panels.

37. (New): The mine door leaf as set forth in claim 36 further comprising a mechanical coupling device for mechanical coupling of the filling to the door panels, said mechanical coupling device comprising at least one of the following: wire screen; and rebar-type elements.

38. (New): A mine door installation in a mine passageway of a mine, comprising

a doorway frame in said mine passage, said doorway frame comprising a column yieldable to accommodate mine convergence without permanent deformation of the doorway frame;

a door leaf mounted on said doorway frame for swinging between open and closed positions;

said door leaf having a generally laminar construction comprising a central core of a solidified composition, and outer panels on opposite faces of the core, the core having a force-transmitting relationship with the panels constituting the panels and core as an integral stress-resistant structure resistant to stresses to which the door leaf is subjected in said mine, including torsion-induced stresses, shear and bending stresses, and stresses induced by its own weight.

39. (New): The mine door installation of claim 38 wherein the force-transmitting relationship is established by mechanical coupling of the core to the door panels.

40. (New): The mine door leaf as set forth in claim 39 further comprising a mechanical coupling device for mechanical coupling of the core to the door panels, said mechanical coupling device comprising at least one of the following: wire screen; and rebar-type elements.
